



Missouri Department of Natural Resources
Tributary to Middle Fork Tebo Creek - WBID 1288
Water Chemistry Data, 2000-2007

| Org | Site | Site Name | Yr | Mo | Dy | Time | H | Flow | C | DO | pH | NH3N | SO4 | Cl | SO4+Cl |
|------|----------|---|------|----|----|------|------|------|------|------|---------|---------|-------|-------|--------|
| MDNR | 1288/0.5 | Trib. to M. Fork Tebo Creek at CR NE 1200 | 2000 | 3 | 21 | | | | 11 | 7.5 | | 661 | 6 | 667 | |
| MDNR | 1288/0.5 | Trib. to M. Fork Tebo Creek at CR NE 1200 | 2000 | 6 | 15 | | | | 22 | 7.4 | | 742 | 5 | 747 | |
| MDNR | 1288/0.5 | Trib. to M. Fork Tebo Creek at CR NE 1200 | 2000 | 9 | 21 | 4 | 0 | 14 | 6.9 | | 1220 | 7 | 1227 | | |
| MDNR | 1288/0.5 | Trib. to M. Fork Tebo Creek at CR NE 1200 | 2001 | 4 | 26 | 9 | 0.9 | 14 | 9.6 | 7.5 | | 1130 | 6 | 1136 | |
| MDNR | 1288/0.5 | Trib. to M. Fork Tebo Creek at CR NE 1200 | 2001 | 6 | 13 | | | | 27 | 7.2 | 7.3 | 1450 | 4.99 | 1455 | |
| MDNR | 1288/0.5 | Trib. to M. Fork Tebo Creek at CR NE 1200 | 2001 | 8 | 16 | 1230 | 9 | | 20 | 7.8 | 7.5 | 2260 | 2.499 | 2262 | |
| MDNR | 1288/0.5 | Trib. to M. Fork Tebo Creek at CR NE 1200 | 2001 | 8 | 14 | 1555 | 9 | | 23 | | 7.7 | 1920 | 7 | 1927 | |
| MDNR | 1288/0.5 | Trib. to M. Fork Tebo Creek at CR NE 1200 | 2001 | 9 | 6 | | | | 24 | 5.6 | 7.1 | 2030 | 8 | 2038 | |
| MDNR | 1288/0.5 | Trib. to M. Fork Tebo Creek at CR NE 1200 | 2001 | 10 | 3 | 1410 | | | 16 | 6.6 | 7.3 | 1750 | 8 | 1758 | |
| MDNR | 1288/0.5 | Trib. to M. Fork Tebo Creek at CR NE 1200 | 2001 | 11 | 27 | | | | 6 | | 7.5 | 1930 | 8.31 | 1938 | |
| MDNR | 1288/0.5 | Trib. to M. Fork Tebo Creek at CR NE 1200 | 2001 | 11 | 30 | | | | 5 | 11 | 7.6 | 1920 | 9 | 1929 | |
| MDNR | 1288/0.5 | Trib. to M. Fork Tebo Creek at CR NE 1200 | 2002 | 1 | 10 | 1105 | | | 0 | 12 | 7 | 2110 | 10 | 2120 | |
| MDNR | 1288/0.5 | Trib. to M. Fork Tebo Creek at CR NE 1200 | 2002 | 3 | 14 | 1120 | | | 11 | 11.1 | 7.6 | 1790 | 9 | 1799 | |
| MDNR | 1288/0.5 | Trib. to M. Fork Tebo Creek at CR NE 1200 | 2002 | 6 | 6 | | | | 18 | 8.5 | 7.57 | 1300 | 5.63 | 1306 | |
| MDNR | 1288/0.5 | Trib. to M. Fork Tebo Creek at CR NE 1200 | 2002 | 6 | 20 | | | | 22 | 6.7 | 7.7 | 983 | 6 | 989 | |
| MDNR | 1288/0.5 | Trib. to M. Fork Tebo Creek at CR NE 1200 | 2002 | 10 | 2 | 1415 | | | 21 | | 7.7 | 2270 | 10 | 2280 | |
| MDNR | 1288/0.5 | Trib. to M. Fork Tebo Creek at CR NE 1200 | 2003 | 4 | 23 | 1135 | | | 13 | 9 | 7.6 | 1590 | 8 | 1598 | |
| MDNR | 1288/0.5 | Trib. to M. Fork Tebo Creek at CR NE 1200 | 2003 | 6 | 10 | 1500 | | | 17 | 8 | 7.1 | 1160 | 4 | 1164 | |
| MDNR | 1288/0.5 | Trib. to M. Fork Tebo Creek at CR NE 1200 | 2004 | 11 | 10 | 1600 | | | 12 | 9.2 | 7.1 | 663 | 2.499 | 665 | |
| MDNR | 1288/0.5 | Trib. to M. Fork Tebo Creek at CR NE 1200 | 2005 | 5 | 26 | 1200 | | | 18.1 | | 7.2 | 2200 | 5 | 2205 | |
| MDNR | 1288/0.5 | Trib. to M. Fork Tebo Creek at CR NE 1200 | 2005 | 12 | 6 | 1230 | | | 0.6 | 12.8 | 7.4 | 2220 | 13 | 2233 | |
| MDNR | 1288/0.5 | Trib. to M. Fork Tebo Creek at CR NE 1200 | 2006 | 6 | 6 | 1430 | | | 22 | 6.7 | 7.2 | 1330 | 5.93 | 1336 | |
| MDNR | 1288/0.5 | Trib. to M. Fork Tebo Creek at CR NE 1200 | 2006 | 12 | 14 | 1330 | | | 3 | 9.4 | 6.8 | 1040 | 11 | 1051 | |
| MDNR | 1288/1.5 | Trib. M. Fork Tebo Creek 0.1mi. below AML | 2000 | 3 | 21 | | | | 13 | | 7.1 | | 533 | 6 | 539 |
| MDNR | 1288/1.5 | Trib. M. Fork Tebo Creek 0.1mi. below AML | 2000 | 3 | 9 | | | | 17 | 7.6 | 7.6 | 0.0499 | 424 | 7 | 431 |
| MDNR | 1288/1.5 | Trib. M. Fork Tebo Creek 0.1mi. below AML | 2000 | 6 | 15 | | | | 26 | | 7.2 | | 544 | 2.499 | 546 |
| MDNR | 1288/1.5 | Trib. M. Fork Tebo Creek 0.1mi. below AML | 2000 | 6 | 20 | | 1.7 | 23 | 8.2 | 7.4 | 0.02499 | 475 | 2.499 | 477 | |
| MDNR | 1288/1.5 | Trib. M. Fork Tebo Creek 0.1mi. below AML | 2000 | 9 | 11 | | | | 24 | 5.6 | 3.6 | 0.26 | 2280 | 6 | 2286 |
| MDNR | 1288/1.5 | Trib. M. Fork Tebo Creek 0.1mi. below AML | 2000 | 9 | 21 | 4 | 0 | 14 | | 3.7 | | 2450 | 7 | 2457 | |
| MDNR | 1288/1.5 | Trib. M. Fork Tebo Creek 0.1mi. below AML | 2001 | 3 | 7 | | 1.38 | 11 | 11 | 6.9 | 0.02499 | 652 | 7 | 659 | |
| MDNR | 1288/1.5 | Trib. M. Fork Tebo Creek 0.1mi. below AML | 2001 | 4 | 26 | 9 | 0.6 | 18 | 9.5 | 7 | | 1150 | 2.499 | 1152 | |
| MDNR | 1288/1.5 | Trib. M. Fork Tebo Creek 0.1mi. below AML | 2001 | 6 | 26 | | | 0.59 | 29 | 7.2 | 7.1 | 0.02499 | 975 | 4.99 | 980 |

| Org | Site | Site Name | Yr | Mo | Dy | Time | H | Flow | C | DO | pH | NH3N | SO4 | Cl | SO4+Cl |
|------|----------|---|------|----|----|------|---|--------|------|------|------|---------|------|-------|--------|
| MDNR | 1288/1.5 | Trib. M. Fork Tebo Creek 0.1mi. below AML | 2001 | 6 | 13 | | | | 30 | 6.9 | 7.2 | | 1220 | 4.99 | 1225 |
| MDNR | 1288/1.5 | Trib. M. Fork Tebo Creek 0.1mi. below AML | 2001 | 8 | 16 | 1250 | 9 | | 28 | 8.6 | 6.2 | | 2350 | 2.499 | 2352 |
| MDNR | 1288/1.5 | Trib. M. Fork Tebo Creek 0.1mi. below AML | 2001 | 8 | 14 | 1620 | 9 | | 27 | | 6.5 | | 1950 | 2.499 | 1952 |
| MDNR | 1288/1.5 | Trib. M. Fork Tebo Creek 0.1mi. below AML | 2001 | 9 | 6 | | | | 25 | 7.6 | 5.8 | | 1960 | 8 | 1968 |
| MDNR | 1288/1.5 | Trib. M. Fork Tebo Creek 0.1mi. below AML | 2001 | 9 | 7 | | | 0.11 | 23 | 4.2 | 7.2 | 0.02499 | 453 | 2.499 | 455 |
| MDNR | 1288/1.5 | Trib. M. Fork Tebo Creek 0.1mi. below AML | 2001 | 10 | 3 | 1440 | | | 22 | 7.2 | 5 | | 1850 | 8 | 1858 |
| MDNR | 1288/1.5 | Trib. M. Fork Tebo Creek 0.1mi. below AML | 2001 | 11 | 27 | | | | 7 | | 6.2 | | 2120 | 9.44 | 2129 |
| MDNR | 1288/1.5 | Trib. M. Fork Tebo Creek 0.1mi. below AML | 2001 | 11 | 30 | | | | 4 | 11.3 | 6.7 | | 2150 | 13 | 2163 |
| MDNR | 1288/1.5 | Trib. M. Fork Tebo Creek 0.1mi. below AML | 2001 | 12 | 14 | | 9 | 0.2499 | 7 | 10.1 | 5.9 | 0.02499 | 386 | 5 | 391 |
| MDNR | 1288/1.5 | Trib. M. Fork Tebo Creek 0.1mi. below AML | 2002 | 1 | 10 | 1045 | | | 1 | 12.4 | 6.1 | | 2320 | 15 | 2335 |
| MDNR | 1288/1.5 | Trib. M. Fork Tebo Creek 0.1mi. below AML | 2002 | 3 | 14 | | | | 13 | 10.4 | 7.3 | | 938 | 10 | 948 |
| MDNR | 1288/1.5 | Trib. M. Fork Tebo Creek 0.1mi. below AML | 2002 | 3 | 20 | | | 0.2499 | 12 | 11.8 | 7.8 | 0.02499 | 432 | 7 | 439 |
| MDNR | 1288/1.5 | Trib. M. Fork Tebo Creek 0.1mi. below AML | 2002 | 6 | 20 | | | | 23 | 7 | 7.2 | | 743 | 2.499 | 745 |
| MDNR | 1288/1.5 | Trib. M. Fork Tebo Creek 0.1mi. below AML | 2002 | 6 | 6 | | | | 22 | 9 | 7.21 | | 1160 | 6.09 | 1166 |
| MDNR | 1288/1.5 | Trib. M. Fork Tebo Creek 0.1mi. below AML | 2002 | 6 | 6 | | | 0.2499 | 20 | 6.3 | 7.57 | 0.02499 | 292 | 6.61 | 299 |
| MDNR | 1288/1.5 | Trib. M. Fork Tebo Creek 0.1mi. below AML | 2002 | 10 | 2 | 1445 | | | 24 | | 2.8 | | 2550 | 9 | 2559 |
| MDNR | 1288/1.5 | Trib. M. Fork Tebo Creek 0.1mi. below AML | 2003 | 3 | 3 | 1200 | | 0.2499 | 2.5 | 11.3 | 6.78 | 0.02499 | 593 | 16.6 | 610 |
| MDNR | 1288/1.5 | Trib. M. Fork Tebo Creek 0.1mi. below AML | 2003 | 4 | 23 | 1210 | | | 17 | 8.9 | 6.6 | | 1510 | 7 | 1517 |
| MDNR | 1288/1.5 | Trib. M. Fork Tebo Creek 0.1mi. below AML | 2003 | 6 | 10 | 1440 | | | 18 | 6.6 | 5.9 | | 1170 | 4 | 1174 |
| MDNR | 1288/1.5 | Trib. M. Fork Tebo Creek 0.1mi. below AML | 2003 | 6 | 5 | 1240 | | 0.2499 | 17 | 8.65 | 7.22 | 0.01499 | 373 | 5.67 | 379 |
| MDNR | 1288/1.5 | Trib. M. Fork Tebo Creek 0.1mi. below AML | 2003 | 12 | 17 | 1200 | | 1.6 | 2 | 12.8 | 5.6 | 0.07 | 180 | 6 | 186 |
| MDNR | 1288/1.5 | Trib. M. Fork Tebo Creek 0.1mi. below AML | 2004 | 3 | 11 | 1155 | | 0.26 | 9.5 | 12.4 | 6.4 | 0.14 | 459 | 6 | 465 |
| MDNR | 1288/1.5 | Trib. M. Fork Tebo Creek 0.1mi. below AML | 2004 | 6 | 16 | 1200 | | | 28 | 6.3 | 7.3 | | 498 | 5 | 503 |
| MDNR | 1288/1.5 | Trib. M. Fork Tebo Creek 0.1mi. below AML | 2004 | 11 | 10 | 1520 | | | 13 | 8.2 | 6.8 | | 747 | 9 | 756 |
| MDNR | 1288/1.5 | Trib. M. Fork Tebo Creek 0.1mi. below AML | 2005 | 5 | 26 | 1230 | | | 22.8 | | 6.7 | | 1920 | 5 | 1925 |
| MDNR | 1288/1.5 | Trib. M. Fork Tebo Creek 0.1mi. below AML | 2005 | 12 | 6 | 1300 | | | 1.8 | 11.7 | 4.6 | | 2290 | 12 | 2302 |
| MDNR | 1288/1.5 | Trib. M. Fork Tebo Creek 0.1mi. below AML | 2006 | 6 | 6 | 1500 | | | 24 | 7.2 | 6.2 | | 1250 | 4.28 | 1254 |
| MDNR | 1288/1.5 | Trib. M. Fork Tebo Creek 0.1mi. below AML | 2006 | 12 | 14 | 1245 | | | 5 | 8.1 | 6.4 | | 1200 | 8.74 | 1209 |
| MDNR | 1288/1.5 | Trib. M. Fork Tebo Creek 0.1mi. below AML | 2007 | 6 | 13 | 1200 | | | 26.5 | 6.2 | 6.5 | | 1050 | 4 | 1054 |
| USGS | 1288/3.5 | Trib. to M. Fork Tebo within AML | 2002 | 12 | 10 | 1210 | | 0.2499 | 3.5 | 410 | 6.1 | 0.02499 | 515 | 6.11 | 521 |

The water quality standard for protection of aquatic life for sulfate plus chloride is 1000mg/L. The Listing Methodology Document allows a water to be judged as impaired if 10 percent of measurements fail to meet the water quality standard. Thirty-nine of 62 samples exceeded the standard, or 62.9 percent.

The z calculation is 13.89. Since this is more than the tabular z value of 1.382, this water is judged to be **impaired** by sulfate plus chloride.

The water quality standard for protection of aquatic life for pH is 6.5 to 9.0. For pH, the Listing Methodology Document allows a water body to be judged as impaired if more than 10 percent of the measurements fail to meet the water quality standard. Sixteen of 39 pH measurements immediately downstream of the abandoned mine lands exceeded the standard, or 41.0 percent. Since the binomial probability is less than the minimum allowable type one error rate of 0.1, this segment is judged to be **impaired** by pH.

The water quality standard for protection of aquatic life for pH is 6.5 to 9.0. For pH, the Listing Methodology Document allows a water body to be judged as impaired if more than 10 percent of the measurements fail to meet the water quality standard. Zero of 23 pH measurements further downstream of the abandoned mine lands exceeded the standard, or 0 percent. The binomial probability is .911. Since this probability is more than the minimum allowable type one error rate of 0.1, this segment is judged to be **unimpaired** by pH.

A Total Maximum Daily Load for sulfate and pH for Tributary to Middle Fork Tebo Creek was approved by EPA in 2004; therefore, Tributary to Middle Fork Tebo Creek will not be placed on the 303(d) List.

Missouri Department of Natural Resources' Water Protection Program, 573-751-1300, www.dnr.mo.gov
3/7/08 LAT